KULLYSPELL ESTATES- WELL (PWS 1090053)
SOURCE WATER ASSESSMENT REPORT

April 3, 2001

State of Idaho
Department of Environmental Quality

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for Kullyspell Estates- Well (1090053)* located in Bonner County, Idaho, describes the public drinking water system, the associated potential contaminant sources located within a 1,000' boundary around the drinking water source, and the susceptibility (risk) that may be associated with any associated potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should <u>not be</u> used as an absolute measure of risk and is not intended to undermine the confidence in your water system.**

The Kullyspell Estates drinking water system consists of one surface water intake and one well. The focus of this document will be the drinking water well only. The well remains connected to the Kullyspell Estates drinking water system, but has been designated a back-up source as the water system is currently using surface water as its primary source of drinking water. Water samples taken from the well before it was designated as a back-up source were occasionally positive for total coliform bacteria. The well was drilled in 1979 and has been maintained appropriately. It is 395 feet deep. These factors are reflected in the well's low system construction score. The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules (1993)* require all public water systems (PWSs) to follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the *Recommended Standards for Water Works (1997)* during construction. Various aspects of the standards can be assessed from well logs. Table 1 of the *Recommended Standards for Water Works (1997)* states that 6-inch steel casing requires a thickness of 0.280 inches. Well #1 uses 0.250-inch thick casing and did receive one susceptibility point in the system construction category due to this.

The well received a moderate hydrologic sensitivity score. While relatively thin clay layers in the area may provide some protection against contamination, they are not significant.

There are no documented potential contaminant sites located within the delineated source water assessment area. Accordingly, the Kullyspell Estates well's Potential Contaminant/Land Use scores are zero in the categories of inorganic chemicals, volatile organic chemicals, synthetic organic chemicals and microbials. The well's overall susceptibility rating is low in all categories. A copy of the susceptibility analysis for your system along with a map showing any potential contaminant sources is included with this summary. Information regarding the potential contaminants within the 1,000' boundary have been summarized and included in Table 1.

Figure 1. Kullyspell Estates Well Delineation Location and Potential Contaminant Inventory

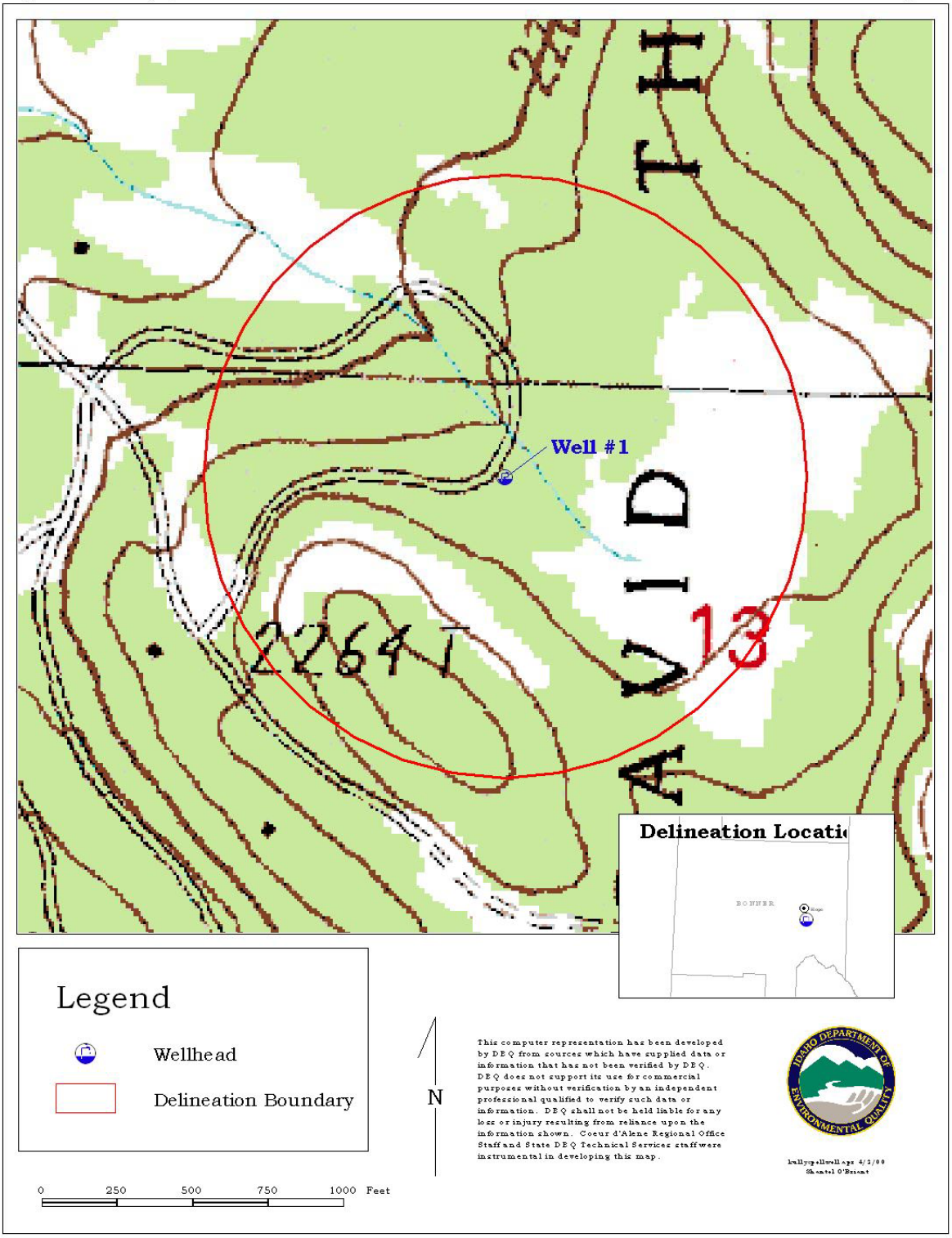

Table 1.

SITE #	Source Description	Source of Information	Potential Contaminants
No documented potential contaminant sites.			

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Kullyspell Estates should focus source water protection activities for the back-up well on the implementation of practices aimed at maintaining the source water assessment free from potential contaminant sites. This will protect not only the well itself, but will prevent contamination of the current drinking water supply by contaminants located near the well. Should the well be put back into use, it should be monitored closely for bacterial contamination because of its history of water samples positive for total coliform bacteria. The water system should take steps to educate Kullyspell Estate residents of proper methods for the storage, disposal and use of potential contaminants, such as household chemicals, within the designated source water area. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing source water protection strategies please contact Alan Miller at the Coeur d'Alene regional DEQ office at (208) 769-1422.

Ground Water Susceptibility Report Public Water System Name : KULLYSPELL ESTATES Well# : WELL #1

Public Water System Number 1090053 1/9/01 2:46:18 PM

1. System Construction		SCORE
Drill Date	6/6/79	
Driller Log Available	YES	
Sanitary Survey (if yes, indicate date of last survey)	YES	1995
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	YES	0
Casing and annular seal extend to low permeability unit	YES	0
Highest production 100 feet below static water level	YES	0
Well located outside the 100 year flood plain	YES	0
	Total System Construction Score	1

2. Hydrologic Sensitivity		
Soils are poorly to moderately drained	YES	0
Vadose zone composed of gravel, fractured rock or unknown	NO	0
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2
	Total Hydrologic Score	3

3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0

Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leachable contaminants or	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		0	0	0	0
Cumulative Potential Contaminant / Land Use Score		0	0	0	0
4. Final Susceptibility Source Score		4	4	4	4
5. Final Well Ranking		Low	Low	Low	Low

Ground Water Final Susceptibility Scoring

0-5 = Low Susceptibility

6-12 = Moderate Susceptibility

13-18 = High Susceptibility